

Claims:

1. A system for renting a software program in a distributed computing environment, wherein the rental software program includes a main executable file and optional files, comprising:

a user computer system including means for initially downloading the main executable file of the rental software program and means, if an optional file is missing, for automatically requesting one or more optional files contained in the rental software program; and

a server computer system for downloading the main executable file contained in the rental software program to be executed in said user computer system and means for automatically downloading the one or more optional files as requested by said user computer system.

2. The system as recited in claim 1, wherein said user computer system further comprising:

a storage means for storing the main executable file, the one or more optional files contained in the rental software program if downloaded and a list of optional files downloaded from said server computer system;

a process manager means further comprising means for creating and running a process corresponding to the main executable file, means for suspending the process if the process requests one or more optional files, and means for re-starting the process if said process manager means receives the one or more optional files from said server computer system; and

a monitor means for monitoring the process to determine whether the process requests the one or more optional files, and further comprising means for intercepting a message requesting the one or more optional files from the process,

and means for automatically requesting the one or more optional files to said server computer system.

3. The system as recited in claim 2, wherein said server computer system further comprising means for sending the list of optional files to said user computer system when said server computer sends the main executable file to said user computer system and wherein the optional files includes a registry file.

4. The system as recited in claim 3, wherein said user computer system further includes:

a protection means for protecting the rental software program rented from said server computer system to prevent an unauthorized use committed by said user computer system;

a converting means for converting registry file information contained in the list of optional files into registry file information appropriate to said user computer system; and

a billing database for storing billing information.

5. The system as recited in claim 4, wherein the billing information includes a billing start time, a billing end time and a name of the rental software program selected by said user computer system.

6. The system as recited in claim 4, wherein said process manager means further comprising means for flushing the main executable file and the one or more optional files stored in said storage means when the process is complete based on the registry file information.

7. The system as recited in claim 1, wherein said server computer system includes:

a verification means for verifying said user computer

system by using identification information of said user computer system stored in a user-information database;

a program database for storing path information of the main executable file, a list of rental software programs and
5 a list of the optional files;

an analyzing means for analyzing a new rental software program when the new rental software program is installed in said server computer system, wherein said analyzing means further comprises means for storing the path information of
10 the main executable file and a list of the optional files, associated with the new rental software program, in said program database;

a storage means for storing the main executable file and the one or more optional files; and

15 a means for obtaining and sending the main executable file stored in said storage means when said user computer system selects the desirable rental software program; and

means for obtaining and sending the one or more optional files stored in said storage means when said user computer
20 system optionally requests the one or more optional files to said server computer system.

8. The system as recited in claim 7, wherein said server computer system further includes:

25 a billing means for processing charge or fee to be paid for the usage of the main executable file and the one or more optional files associated with the rental software program provided to said user computer system;

30 a log database for storing a log file necessary for recovering said server computer system when said server computer system is not operable due to a serious error;

a recovery means for recovering said server computer system by using the log file stored in said log database when
35 said server computer system is not operable due to the serious error;

a schedule management means for managing a schedule of requests from said user computer system and another user computer system; and

a session management means for managing a communication session between said user computer system and said server computer system.

9. The system as recited in claim 8, wherein said server computer system sends the list of optional files to said user computer system when said server computer system sends the main executable file to said user computer system and wherein the optional files includes a registry file.

10. A method for renting a rental software program in a distributed computing environment, wherein the rental software program includes a main executable file and optional files, comprising:

performing a communication connection between a user computer system and a server computer system, wherein the user computer system is based on a user-transparent program install-free technology;

displaying a list of rental software programs downloaded from the server computer system;

selecting the rental software program in the list of rental software programs;

downloading a main executable file associated with the rental software program from the server computer system to run a process corresponding to the main executable file; and

if the process needs one or more optional files, downloading the one or more optional files from the server computer system.

11. The method as recited in claim 10, wherein establishing the communications further comprises:

5

0

5

20

25

50

85

suspending the process until the user computer system
downloads the one or more optional files from the server

service from a server computer system;

establishing a rental session between a client computer system and the server computer system;

fetching one or more application software from a plurality of application software stored in the server computer system;

executing the one or more application software in the client computer system; and

if said prior step is complete, flushing the one or more application software rented from the server computer system.

17. The method as recited in claim 16, wherein the list of applications is established on Internet.

18. The method as recited in claim 16, wherein the one or more application software include a main executable file.

19. The method as recited in claim 16, wherein the one or more application software is authorized by the server computer system.

20. The method as recited in claim 18, wherein executing the application software further comprises:

creating a process corresponding to the main executable file;

running the process;

monitoring additional requests to access related files from the process by message hooking and file monitoring while the process is running;

if the process needs any related file, generating a message requesting one or more related files and transmitting the message to the server computer system to fetch the one or more related files based on an on-demand scheme; and

re-running the process after the one or more related files are delivered to the client computer system.

09041330 081300

21. A computer-readable media storing program instructions, the program instructions disposed on a computer to perform a method for renting a rental software program in a distributed computing environment, wherein the rental software program includes a main executable file and optional files, comprising the steps of:

establishing a communication connection between a user computer system and a server computer system, wherein the user computer system is based on a user-transparent program install-free technology;

displaying a list of rental software programs downloaded from the server computer system;

selecting the rental software program in the list of rental software programs;

downloading a main executable file associated with the rental software program from the server computer system to run a process corresponding to the main executable file; and

if the process needs one or more optional files, downloading the one or more optional files from the server computer system.

22. The computer-readable media as recited in claim 21, wherein establishing the communications further comprises:

performing the communication connection between the user computer system and the server computer system; and

verifying the user computer system in the server computer system.

23. The computer-readable media as recited in claim 21, wherein downloading further comprises:

downloading the main executable file and a list of optional files from the server computer system, wherein the optional files include a registry file;

converting registry file information contained in the

list of optional files into registry file information appropriate to the user computer system;

running a file monitor and a protector, which protects the rental software program including the main executable file and the one or more optional files from an unauthorized use committed by the user computer system;

storing a name of the rental software program selected by the user computer system and a billing start time in a billing information database of the user computer system;

informing the server computer system of the billing start time; and

creating and running the process corresponding to the main executable file.

24. The computer-readable media as recited in claim 23, wherein downloading optional files further comprise:

monitoring the process in the file monitor in order to determine whether the process needs the one or more optional files;

if the process needs the one or more optional files, hooking a message requesting the one or more optional files from process;

suspending the process until the user computer system downloads the one or more optional files from the server computer system; and

if the user computer system downloads the one or more optional files from the server computer system, re-running the process.

25. The computer-readable media as recited in claim 22, wherein downloading the optional files further comprises:

determining whether the process has been complete;

if the process has been complete, performing a procedure accompanying a process completion;

determining whether the user computer system wants to

if the user computer system wants to select the another rental software program, repeating the application software downloading steps; and

5 if the user computer system does not want to select the
another rental software program, terminates the communication
connection between the user computer system and the server
computer system.

10 26. The computer-readable media as recited in claim 25,
 wherein the completion process further comprises:

```

        if the process has been complete, terminating the file
monitor and the protector;

```

storing a billing end time in the billing information
15 database of the user computer system;

informing the server computer system of the billing end time; and

flushing the main executable file and the one or more optional files stored in the storage device of the user computer system.

25 27. A system for renting a rental software program in a distributed computing environment, wherein the rental software program includes a main executable file and one or more optional files, comprising:

a first means for pulling the main executable file out of a server computer system; and

a second means for pulling the one or more optional files out of the server computer system.

30 28. The system as recited in claim 27, further
comprising:

a storage means for storing the main executable file and the one or more optional files pulled out of the server computer system;

a process manager means for creating and running a process corresponding to the main executable file; suspending the process if the process requests the one or more optional files; and re-running the process if said process manager means receives the one or more optional files; and

a monitor means for monitoring the process to determine whether the process requests the one or more optional files; and hooking a message requesting the one or more optional files from the process.

29. The system as recited in claim 28, further comprising:

a protection means for protecting the rental software program to prevent an unauthorized use committed by said user computer system; and

a billing database for storing billing information.

30. The system as recited in claim 29, wherein the billing information includes a billing start time, a billing end time and a name of the rental software program.

31. The system as recited in claim 30, wherein said process manager means flushes the main executable file and the one or more optional files stored in said storage means when the process is complete.

32. A system for providing a rental software program in a distributed computing environment, wherein the rental software program includes a main executable file and one or more optional files, comprising:

a first means for pushing the main executable file into a user computer system; and

a second means for pushing the one or more optional files into the user computer system.

33. The system as recited in claim 30, wherein said first and second means are intended for advertisement.

34. The system as recited in claim 30, wherein said first and second means are intended for freeware.

35. The system as recited in claim 32, further comprising:

a program database for storing path information of the main executable file, a list of rental software programs and a list of the optional files;

an analyzing means for analyzing a new rental software program when the new rental software program is installed, wherein said analyzing means stores the path information of the main executable file and a list of the optional files, associated with the new rental software program, in said program database; and

a storage means for storing the main executable file and the one or more optional files.

36. A system for renting a rental software program, wherein the system includes at least one client computer system and a server computer system and the rental software program includes a main executable file and one or more optional files, comprising:

a first means for pulling the main executable file and the one or more optional files; and

a second means for pushing the main executable file and the one or more optional files.

37. The system as recited in claim 36, wherein said first means further includes:

a storage means for storing the main executable file and the one or more optional files;

a process manager means for creating and running a

process corresponding to the main executable file; suspending the process if the process requests the one or more optional files; and re-running the process if said process manager means receives the one or more optional files; and

5 a monitor means for monitoring the process to determine whether the process requests the one or more optional files; and hooking a message requesting the one or more optional files from the process.

10 38. The system as recited in claim 36, further comprising:

a protection means for protecting the rental software program to prevent an unauthorized use; and

15 a billing database for storing billing information.

39. The system as recited in claim 38, wherein the billing information includes a billing start time, a billing end time and a name of the rental software program.

20 40. The system as recited in claim 37, wherein said process manager means flushes the main executable file and the one or more optional files stored in said storage means when the process is complete.

25 41. The system as recited in claim 36, further comprising:

a program database for storing path information of the main executable file, a list of rental software programs and a list of the optional files;

30 an analyzing means for analyzing a new rental software program when the new rental software program is installed, wherein said analyzing means stores the path information of the main executable file and a list of the optional files, associated with the new rental software program, in said
35 program database; and

42. A server for renting a rental software program to a
5 client computer, the server comprising:

means for downloading the main executable file in
10 response to a user's request to rent the software program;
and

43. The server as recited in claim 42 further comprising
20 means for downloading a list of optional files to said user
computer system when said server computer sends the main
executable file to said client computer system and wherein
the optional files includes a registry file.

a verification means for verifying said user computer system by using identification information of said user computer system stored in a user-information database;

an analyzing means for analyzing a new rental software program when the new rental software program is installed in
35 said server computer system, wherein said analyzing means

a storage means for storing the main executable file and
5 the one or more optional files; and

45. The server as recited in claim 44 further
15 comprising:

20 a log database for storing a log file necessary for
recovering said server computer system when said server
computer system is not operable due to a serious error;

a schedule management means for managing a schedule of requests from said user computer system and another user computer system; and

46. The server as recited in claim 45 further comprising
35 means for sending a list of optional files to said user

computer system when said server computer system sends the main executable file to said user computer system and wherein the optional files includes a registry file.

5 47. A client for renting a software program in a distributed computing environment, wherein the rental software program includes a main executable file and optional files, comprising:

10 means for requesting a rental software program from the server;

 means for receiving the main executable file of the software program from the server;

 means for determining that an optional file is required by the main executable file;

15 means for requesting the optional file from the server; and

 means for receiving the optional file.

20 48. The client as recited in claim 47 further comprising:

 a storage means for storing the main executable file, the one or more optional files contained in the rental software program if downloaded and a list of optional files downloaded from said server computer system;

25 a process manager means further comprising means for creating and running a process corresponding to the main executable file, means for suspending the process if the process requests one or more optional files, and means for re-starting the process if said process manager means
30 receives the one or more optional files from said server computer system; and

 a monitor means for monitoring the process to determine whether the process requests the one or more optional files, and further comprising means for intercepting a message
35 requesting the one or more optional files from the process,

09041333-031300

and means for automatically requesting the one or more optional files to said server computer system.

49. The client as recited in claim 48 further comprising:

a protection means for protecting the rental software program rented from said server computer system to prevent an unauthorized use committed by said user computer system;

a converting means for converting registry file information contained in the list of optional files into registry file information appropriate to said user computer system; and

a billing database for storing billing information.

50. The client as recited in claim 49, wherein the billing information includes a billing start time, a billing end time and a name of the rental software program selected by said user computer system.

51. The client as recited in claim 50, wherein said process manager means comprises means for flushing the main executable file and the one or more optional files stored in said storage means when the process is complete.